UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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DATE: April 15, 2003

SUBJECT: Nutting Truck and Caster Company
Faribault, Rice County, Minnesota

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The purpose of this memorandum is to document the United States Environmental Protection Agency's (U.S. EPA's) justification for not delisting the Nutting Truck and Caster Company (CERCLIS ID# MND006154017; Site Spill ID# 05G6) from the National Priorities List (NPL).

Background: The Nutting Truck and Caster Site (Site) was formerly located at 1221 Division Street in Faribault, Rice County, Minnesota. Between 1891 and 1984, the Nutting Truck and Caster Company ("Company" or "Nutting") manufactured and distributed casters, wheels, hand trucks and towline trucks at its 11-acre Faribault facility. Adjacent land use was originally agricultural, but now consists of mixed commercial, light industrial and residential. The Site is within the city of Fairbault (population of 18,000). Beginning in 1959, the facility disposed of waste materials in a pit, including demolition debris, paint sludge, coolant oil, degreaser sludge, used paint stripper, plating waste, and rags with paint and xylol.

Prior to 1970, Nutting deposited foundry wastes in a surface depression at the southern end of the Site. Beginning in 1959, Nutting used a seepage pit in the northwest corner of the Site for deposit of waste and sludges, including waste solvents. This operation continued until April 1979, when the Minnesota Pollution Control Agency (MPCA) issued a Notice of Noncompliance to the Company. In response, the Company excavated materials and

contaminated soils associated with the seepage pit, backfilled it with clean fill, and capped (paved) the area. The MPCA concluded that the excavation had effectively removed the referenced source materials. Groundwater contamination included metals, methylene chloride, 1,1,2-trichloroethylene (TCE), and xylene.

Groundwater Contamination: The City of Faribault operates five municipal wells, the nearest of which is located approximately one-half mile downgradient (north) of the Site. From 1979 to 1983, the Company installed six monitoring wells in the vicinity of the Site, including one upgradient and one downgradient from the former seepage pit. Analytical results indicated ground water beneath the former pit was contaminated with cadmium, cyanide, lead, methylene chloride, TCE, and xylene. TCE was also detected in wells upgradient and at the boundary of the Site.

In October and November 1982, well water analyses indicated all five municipal wells were contaminated with TCE and 1,2-dichloroethylene (1,2-DCE), a degradation product of TCE. However, based on further investigations by the MCPA and the Minnesota Department of Health (MDH), both State agencies concluded that the source of contamination in the municipal well did not appear to be related to the TCE plume migrating from the Site. On September 8, 1983, the Site was placed on the U.S. EPA's NPL.

Threats and Contaminants: Groundwater contamination included 1,2 DCE, 1,1,2 TCE, metals, methylene chloride and xylene.

Cleanup Progress: In 1983, the state issued a Request for Response Action (RFRA) to the Company. MPCA and Nutting signed a Consent Order in 1984, requiring the Company to conduct an investigation of the extent of groundwater contamination originating from its property. On April 26, 1984, MPCA issued a Consent Order to the Company to conduct a Remedial Investigation (RI) to determine the extent of contamination at the site and the effect of contamination on the city's municipal wells. In 1984, the Company shut down operations at the Faribault Site and moved its operations to South Dakota. The Site is now leased for commercial and light industrial purposes.

A Response Order by Consent (Consent Order) signed by the Company and MPCA on September 22, 1987, required the Company to perform the remedial action. The U.S. EPA was not a signatory to the order. A Remedial Action Plan (RAP) was to the Consent Order. The major component of the selected remedial action was the installation of a ground water extraction well system. Pursuant to the remedial work described in the 1987 Consent Order, the Company constructed a groundwater pumpout system in 1992. Five-Year Reviews completed by MPCA in 1994 and 1998, found that containment of the groundwater plume appeared to be effective. The pumpout operation continues with long-term monitoring to provide adequate protection of human health and the environment.

Remedial Investigation water quality monitoring data showed TCE at concentrations up to 570 ug/l, and 1,2-DCE in shallow ground water downgradient of the former seepage pit. TCE has been consistently detected at concentrations less than 35 ug/L in samples from the Prairie du Chien Aquifer monitoring well located immediately downgradient of the former pit location. TCE has not been detected in samples from the three Prairie du Chien monitoring wells installed north of the Site.

The Company drilled several soil borings in the southern portion of the Site to determine whether non-foundry wastes were disposed in the former surface depression. Boring samples were analyzed by head space gas chromatography on-site. Detected contamination was limited to surface or near surface soils, and was attributed to spillage during drum handling in those areas.

TCE is the contaminant of concern at the Site. There is a pending Minnesota Health Risk Limit (HRL) of 5 ug/l for TCE, which is considered the concentration in ground water that can be safely consumed daily for a lifetime. It is MPCA policy to recognize HRLs as proposed by the MDH. State ground water protection programs use the HRLs as criteria for their purposes. The federal Maximum Contaminant Level (MCL) for regulating public water supplies is also 5 ug/l TCE. The MDH, on behalf of the Agency for Toxic Substances and Disease Registry (ATSDR), prepared a "Site Review and Update, Nutting Truck and Caster," dated October 24, 1995. The MDH concluded the following about the Site:

- The ground water remains contaminated with TCE in the glacial drift, St. Peter, and Prairie du Chien aquifers beneath the Site.
- The recent levels of TCE in the ground water at the compliance point have been below the Consent Order cleanup level, but in some instances are above the MCL.
- Channelized flow in the Prairie du Chien results in unpredictable flow rates and directions in sub-regional scales. Irregular flow paths in the Prairie du Chien aquifer have not been documented with respect to the existing Site data.
- The Faribault municipal well field, impacted by TCE, is down gradient from the Site and other potential sources.
- An unknown source may be impacting the Faribault municipal wells.
- *The observed TCE concentrations at the Site* ***fall between the MCL of 5 ug/L (also the Minnesota HRL) and the cleanup level of 50 ug/l.***

The former disposal area has been overlain by an engineered cap in the form of an asphalt parking and loading area. There is no access to the underlying soil by either flora or fauna. The ground water contamination is intercepted by the pumpout wells. Therefore, there are no identified ecological receptors.

Because the April 1984 Consent Order for the Site pre-dated establishment and use of Applicable or Relevant and Appropriate Requirements (ARARs), the Nutting Consent Order did not address ARARs for construction, maintenance and monitoring of the remedial action.

The remedial action comparative performance standards for ground water are the MCLs for public water supplies, and the Minnesota HRLs.

MCLs/HRLs: The MCL and proposed HRL for TCE is 5 ug/l.

- TCE concentrations in the pumping wells have stabilized near (at P17) or slightly above (at P18) the MCL.
- Monitoring well W13 (Prairie du Chien Aquifer) fluctuates within **a range of 5 to 15 ug/l**, with elevated TCE concentrations **between 18 and 54 ug/L** between 1997 and 2001.
- This same pattern of fluctuation in TCE concentrations has also been observed in samples from St. Peter monitoring well B4 located between the former pit area and the pump out wells.
- TCE concentrations in samples from well B4 have ranged from **130-350 ug/l**. TCE concentrations in samples from wells B4 and W13 are typically above both the MCL and HRL.
- Monitoring well B15, located just downgradient of the Site has apparently stabilized at a TCE concentration (primarily <3-8 ug/l) below the MCL/HRL.
- All other existing downgradient monitoring points are also below the MCLs/HRLs.

Project cleanup level: *The project cleanup level as defined in the Remedial Action Plan is **50 ug/l for TCE**, measured in the upper aquifer at the Nutting property boundary.* While contaminant concentrations in a well on site in the vicinity of the source area (B4) continue to exhibit concentrations above the Site cleanup level, existing monitoring and pumpout wells at the Site property boundary (B15, PW17, PW18) currently meet the cleanup level for the Site.

- *In the most recent five-year review for this site, the MPCA has asserted that current project cleanup levels are not appropriate to manage human health risk associated with a TCE plume since they are not consistent with State and Federal ARARs.*

- *The MPCA also asserted that the project cleanup levels must be modified to match both HRL and MCL standards in order to address this issue.*

The Consent Order stated:

- *"the purpose of the [Response Action Plan] RAP is to mitigate migration from the Nutting site of contaminated ground water in the alluvium and upper St. Peter aquifers and thereby ensure protection of the downgradient aquifer for future use as a drinking water supply."*

- *"The RAP specifically requires Nutting to (1) pump out contaminated ground water until a concentration of 50 ppb of TCE is consistently achieved in the alluvium at the Nutting property boundary, and (2) monitor ground water to assess the effectiveness of the pump out system."*

The RAP established a Ground Water monitoring network to assess the effectiveness of the ground water pumpout system, and to detect future contaminant migration from the Site. Since 1987, Nutting has performed semi-annual sampling at eight wells (including the two pumpout wells), the catch basin, and the outfall area at the discharge to Crocker's Creek, although MPCA staff recently reduced this frequency to annually. The ground water samples are analyzed for 1, 1-dichloroethylene (1,1-DCE), cis-1,2-DCE, trans-1,2-DCE, and TCE,. The extraction system monitoring verifies hydraulic containment within a portion of the upper aquifer.

- Contaminant levels are approaching asymptotic conditions in extraction wells P-17 and P-18 at levels close to the HRL/MCL for TCE.
- Most monitoring well sampling data indicate a similar gradual decrease in contaminant levels in the ground water.
- While TCE concentrations in B4, the St. Peter monitoring well in the source area, have been fluctuating and exhibiting slight increasing trends over the last four years, the other St. Peter well, B8, located downgradient of the Site has exhibited TCE concentrations in only 2 sampling events at concentrations of 0.8 and 0.77ug/l over 14 years of sampling indicating the extraction system is effective at capturing the contamination migrating off Site.
- The Site remedy has remained in operation since the March 1998 5 Year Review.
- Data generated since the last review indicates some fluctuation in contaminant concentrations at on-Site monitoring wells (B4 and W13) in the vicinity of the source area. The nature of the increase in TCE concentrations in these wells has not been determined.
- The remedy appears to be effective in restricting the flow of contaminants beyond the pump-out wells located just north of the property boundary.
- The MPCA has since completed its' evaluation of TCE contamination downgradient of the Nutting facility. Based on the data to date, the MPCA and MDH have concluded that the TCE plume from the Site is not associated with the TCE plume impacting local municipal well.

The MPCA stated in its 2003 Five-Year Review that it will pursue the following tasks during the next 5 years

- Develop a Close Out Plan (COP) which will establish criteria through which the remedial action will be shut down.
    - The COP will establish criteria to make the current remedial action more cost-effective to manage in both the short- and long-term duration of the remedial action.
    - The COP will also established criteria which will dictate when it is appropriate to implement a natural attenuation study at the Site. The purpose of this study will be to evaluate the potential for natural attenuation to adequately control

and maintain TCE concentrations down gradient of the pump out system at levels below the associated ARARS (MCLs/HRLs).

Status: Unknown.

- *The MPCA will update project cleanup levels for the Site based on ARARs as described by State and Federal standards (MCLs and HRLs).*

Status: Unknown.

- *Institutional controls in the form of a restrictive covenant will be developed to manage residual contamination left on Site.*

Status: Unknown.

Close Out Procedures for National Priority List Sites
Section 5.1, NPL Deletion Criteria, EPA 540-R-98-016, OSWER Directive 9320.2-09A-P, PB98-963223, January 2000, U.S. EPA Office of Emergency and Remedial Response states:

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300.425(e), states that a site may be deleted from, or recategorized on, the NPL when no response/no further response is appropriate. The Environmental Protection Agency (EPA) must consult with the State in making this determination. To delete a site from the NPL, EPA must determine in consultation with the State, that one of the following criteria has been met.

- *Responsible or other parties have implemented all appropriate response actions required;*
- *All appropriate Fund-financed response under CERCLA has been implemented, and no further response action by responsible parties is appropriate; or*
- *The remedial investigation has shown that th release poses no significant threat to public health or the environment, and, therefore, taking of remedial measures is not appropriate.*

Recommendation: It is the best professional judgement of this Remedial Project Manager that the above conditions have been met and the Site should not be delisted from the NPL.

Cc: W. Carney, U.S. EPA
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